Currently Pending Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (Previously presented) An isolated polypeptide of the structure or formula S-$(L)_n$-B wherein:

(a) S is selected from the group consisting of PTH(1-9) (AlaValSerGluIleGlnLeuMetHis) (SEQ ID NO: 1), PTH(1-5) (AlaValSerGluIle) (SEQ ID NO: 4) or PTH (1-11) (AlaValSerGluIleGlnLeuMetHisAsnLeu) (SEQ ID NO: 46);

(b) L is a glycine present n times;

(c) n is 5 to 10; and

(d) B is a carboxy terminal binding domain of PTH(1-34) or PTHrP(1-34), wherein said carboxy terminal binding domain binds to a PTH- receptor 1 molecule

wherein said polypeptide stimulates intracellular accumulation of cyclic cAMP.

2-4. (Canceled)

5. (Previously presented) The isolated polypeptide of claim 1, wherein L is selected from the group consisting of Gly_5, Gly_7 and Gly_9.

6. (Previously presented) The isolated polypeptide of claim 1, wherein B is selected from the group consisting of PTH(15-31) (LeuAsnSerMetGluArgValGluTrpLeuArgLysLys

LeuGlnAspVal) (SEQ ID NO:2), PTH(17-31) (SerMetGluArgValGluTrpLeuArgLysLysLeu GlnAspVal) (SEQ ID NO:63), PTHrP (15-31) (IleGlnAspLeuArgArgArgPhePheLeuHisHis LeuIleAlaGluIle) (SEQ ID NO:8), and PTHrP(17-31) (AspLeuArgArgArgPhePheLeuHisHis LeuIleAlaGluIle) (SEQ ID NO:12).

7. (Previously presented) An isolated polypeptide selected from the group consisting of: PG5 AlaValSerGluIleGlnLeuMetHisGlyGlyGlyGly GlyLeuAsnSerMetGluArg ValGluTrpLeuArgLysLysLeuGlnAspVal (SEQ ID NO:3), PG9: AlaValSerGluIleGlyGlyGlyGlyGlyGlyGlyGlyGlyLeuAsnSerMetGluArgValGluTrp LeuArgLysLysLeuGlnAspVal (SEQ ID NO:5), PG7: AlaValSerGluIleGlnLeu MetHisGlyGlyGlyGlyGlyGlySerMetGluArgValGluTrpLeuArgLysLysLeuGlnAspVal (SEQ ID NO:6), PrPG5: AlaValSerGluHisGlnLeuLeuHisGlyGlyGlyGlyGlyIleGlnAspLeu ArgArgArgPhePheLeuHisHisLeuIleAlaGluIle (SEQ ID NO:64), PrPG9: AlaValSerGluHisGlyGlyGlyGlyGlyGlyGlyGlyGlyIleGlnAspLeu ArgArgArgPhePheLeuHisHisLeuIleAlaGluIle (SEQ ID NO:65) and PrPG7: AlaValSerGlu HisGlnLeuLeuHisGlyGlyGlyGlyGlyGlyGlyAspLeuArgArgArgPhePheLeuHisHisLeuIleAla GluIle (SEQ ID NO:66).

8. (Previously presented) An isolated polypeptide selected from the group consisting of PG5: AlaValSerGluIleGlnLeuMetHisGlyGlyGlyGlyGlyLeuAsnSerMetGluArgValGlu TrpLeuArgLysLysLeuGlnAspVal (SEQ ID NO:3), PG9: AlaValSerGluIleGlyGlyGly GlyGlyGlyGlyGlyGlyLeuAsnSerMetGluArgValGluTrpLeuArgLysLysLeuGlnAspVal (SEQ

ID NO:5), PG7: AlaValSerGluIleGlnLeuMetHisGlyGlyGlyGlyGlyGlySerMetGluArgVal GluTrpLeuArgLysLysLeuGlnAsnVal (SEQ ID NO:6).

9. (Original) The isolated polypeptide of claim 8 wherein there is a single amino acid substitution.

10. (Previously presented) An isolated polypeptide of the structure or formula S-$(L)_n$-B wherein:

(a) S is X Val X Glu X X X X His (SEQ ID NO: 42), wherein X is an amino acid;

(b) L is glycine and n equals 5-10; and

(c) B is a carboxy terminal binding domain of PTH(1-34) or PTHrP(1-34), wherein said carboxy terminal binding domain binds to a PTH-receptor 1 molecule, wherein said polypeptide stimulates intracellular accumulation of cyclic cAMP.

11. (Previously presented) An isolated polypeptide of the structure or formula S-$(L)_n$-B wherein :

(a) S is Ser Val Ser Glu Ile Gln Leu Met His (SEQ ID NO: 44);

(b) L is 5-10 glycine residues; and

(c) B is Leu Asn Ser Met Glu Arg Val Glu Trp Leu Arg Lys Lys Leu Gln Asp Val (SEQ ID NO: 45).

12-13. (Canceled).

14. (Previously presented) An isolated polypeptide encoded by a nucleic acid sequence selected from the group consisting of: SEQ ID NO:14, SEQ ID NO:15 and SEQ ID NO:16.

15-43. (Canceled)

44. (Previously presented) The isolated polypeptide of claim 7, wherein said polypeptide is modified to improve the solubility, absorption, or biological half-life of said polypeptide and wherein said modification is selected from the group consisting of the addition of C_{1-12} alkyl groups, the addition of C_{1-12} hydroxyalkyl groups, the addition of acyl groups, and lactam cyclization.

45. (Previously presented) The isolated polypeptide of claim 8, wherein said polypeptide is modified to improve the solubility, absorption, or biological half-life of said polypeptide and wherein said modification is selected from the group consisting of the addition of C_{1-12} alkyl groups, the addition of C_{1-12} hydroxyalkyl groups, the addition of acyl groups, and lactam cyclization.

46. (Previously presented) The isolated polypeptide of claim 1, wherein n is an integer from 5 to 9.